**Olympia oyster larval rearing notes:**

* Collect larvae daily on 100um screen– morning & evening if possible. Larvae should be 180-185um when released
  + Don’t use anything smaller then 200um to screen out debris
* Using 100um screen, rinse with FSW @ 18degC
* \*Soak larvae in freshwater @ 18degC for 1 minute
* Put larvae into tripour, fill to appropriate volume, and sample ~100 larvae in triplicates to count
* Stock larvae @ 10 larvae/mL, because…
  + 1 larva/mL for flow rate = 1 tank turnover per day, so…
    - 4.5 gallons buckets = 17 L
    - Flow rate = ~7 L/hr
    - 1 turnover = 2.43 hrs
    - # turnovers per day = 24hrs/2.43 = ~10 turnovers per day
  + **170,000 larvae per bucket**
    - **PSRF: kept under 5mil in 170L conicals**
* 1x weekly, Clean broodstock
  + This is obvious
* 2x weekly, Clean larvae
  + Tips & tricks:
  + Drop onto 100um screen into water
  + Screen 2-sizes larger.
    - E.g. released 1.5 weeks ago, tank labeled 180
    - Screen on 224 & 200; anything that’s not held on either put back in 180um
    - Always have 2 “just-in-case” screens
    - Screening for size = how quickly are they growing and when to set them? Also, to know when setting tank space is needed.
    - Also, stocking density is dependent on size.
    - Also, size sorting keeps older ones separate from a potentially sick, younger batch.
    - Using screens to size is industry standard. BUT maybe
    - (FYI: Took 9am-2pm to screen out all conicals.)
    - When pouring be careful, gentle, etc.
    - Don’t let larvae sit out in tri-pours very long. Bubbling is gentle.
  + Screen size groups for counting purposes - 2 size groups from where they were last measured
  + Freshwater bath again? – Nope.
  + Clean tanks with vortex
  + Rinse lines/algae pump lines with bleachwater, then fresh
    - Run 5 minutes of freshwater, then…
    - 5 minutes with 1mL bleach : freshwater
    - Then run 5 minutes of freshwater again
* When larvae hold on 224um, try to set them:
  + Provide micro-culch
  + E.g. set on a Tuesday, then on a Thursday before next set, go through and see how everything is doing. So
  + No set ratio of micro-cultch/larvae/silo size.
  + Have 2 silos ready per group. Silo A & B. Silo A set on Tuesady, check that next Tuesday and screen through 300um. Silo B set on Thursday, check next Thursday.
  + OR:
    - Set on 450um, wait 2-7 days
      * Could have larvae set on seed if they are in the same tank
      * Should ask Ryan if we could use the coke bottles system…?
  + (Figure out how many larvae I can set in one of those silos. )
  + microculch for singles; 450um can create cluster, BUT this allows
  + *Hazy on the next steps…*
* Making micro-cultch.
  + Find shell-hash pile, screen through to 450, rinse off really well. Stick in micro-wave toaster to dry/sanitize – turn on to max until it looks dry.
* Lessons learned:
  + This year: handled larvae much less and improved production